



# FortiAP 222B

## QuickStart Guide



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# Package Contents

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Thank you for purchasing the FortiAP 222B. The FortiAP 222B offers you unmatched performance, flexibility, and security for your wireless network. The appliance combines high performance hardware with multi-band wireless support, weatherproofing, Power over Ethernet, and provides simplified protection for your network with Fortinet's unmatched depth and breadth of security services.

Your box contains the following:

FortiAP-222B

Grounding Cable and Power Adapter

2x 2.4 GHz Wireless Antenna (N-type connector)

2x 5 GHz Wireless Antenna (N-type connector)

Power over Ethernet Adapter

Weatherproof connector

Mounting Hardware

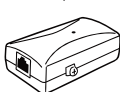
QuickStart and Installation Guides



Grounding Cable &  
Power Adapter



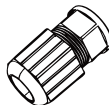
PoE  
Adapter



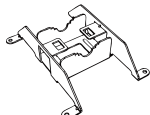
2 x 5 GHz Antenna  
2 x 2.4 GHz Antenna



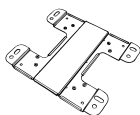
Weatherproof  
Connector



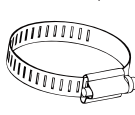
Pole-Mount Bracket



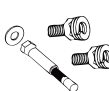
Wall-Mount Base



Pole Strap



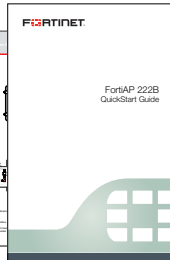
Mounting  
Screws & Bolts



Install  
Guide

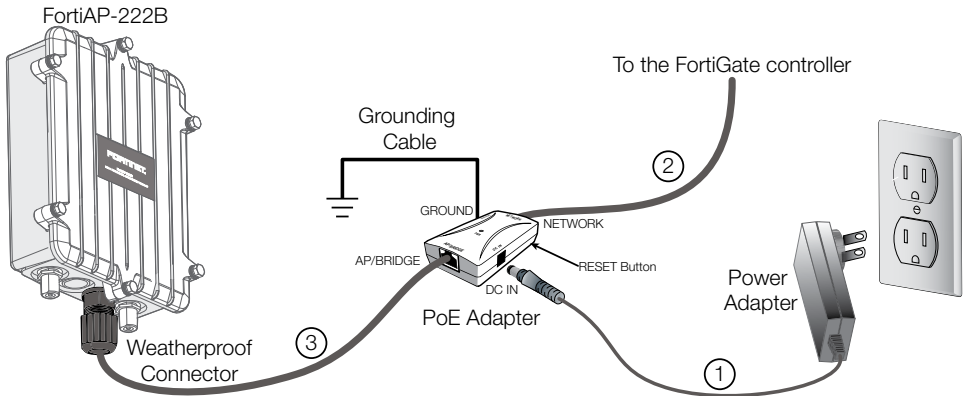


QuickStart  
Guide



**Note:** Accessories may not be exactly as shown.

# Connecting the FortiAP Unit



Using the provided mounting brackets, attach the FortiAP unit to a wall or pole, as described in the *FortiAP-222B Hardware Installation Guide*. The PoE adapter unit is not weatherproof and must be mounted indoors. Adequate grounding must be provided to the FortiAP unit and the PoE adapter, compliance with your local electrical code or regulations. Grounding lugs are provided for this purpose.

## Connect the FortiAP unit as follows:

1. Connect your region-specific AC plug adapter to the AC Adapter by inserting the round disk into the Adapter and rotating clockwise until you hear the disk lock in place.
2. Insert the DC plug of the power adapter into the DC IN port on the PoE adapter. Plug the AC Adapter into a wall outlet or power strip. The PWR LED will light up.
3. Connect one end of a cross-over Ethernet cable into the Network port on the PoE adapter. Connect the other end to the FortiGate controller or router.
4. Using the supplied weatherproof connector, connect one end of a weather-proof straight-through Ethernet cable to the PoE port on the bottom of the FortiAP unit, following the procedure in the *FortiAP-222B Install Guide*. Insert the other end of the Ethernet cable into the AP/Bridge port on the PoE adapter.

**Note:** The FortiAP 222B is certified for use with only the included antennas or with the FortiAP Antenna-336R.

# Configuring the FortiAP Unit

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The FortiAP unit is designed to require no configuration in most networks. Zero Configuration mode works if the unit is directly connected to the FortiGate or FortiWifi performing the Wireless LAN Controller (WLC) functions, or on the same layer-2 network and subnet as the FortiGate or FortiWifi unit.

If the FortiAP wireless controller's IP address cannot be determined using Zero Configuration mode, or if the network uses static IP addresses, it can be configured to use a static IP address.

## To enable the FortiAP using Zero Configuration:

1. After connecting the FortiAP unit as described in the previous chapter, the unit goes through its boot procedure and requests an IP address from the DHCP server.
2. If the IP address is retrieved successfully, the FortiAP enters discovery mode to locate a FortiGate or FortiWifi wireless controller. The discovery modes are:
  - Broadcast
  - Multicast
  - DHCP option 138
3. Verify that the FortiAP has successfully connected to the controller. In the FortiGate Web-based Manager, go to *WiFi Controller > Managed Access Points > Managed FortiAP*. A successfully discovered unit displays an orange circle with a question mark.
4. Select the access point and click *Edit*.
5. In the *State* field, select *Authorize*.
6. In the *AP Profile* field, select *Change*, then select a profile from the list and click *OK*.

## To enable the FortiAP with a static IP address:

1. Connect the FortiAP device to a separate private switch or hub, or directly connect it to your management computer via a cross-over cable.
2. Configure the management computer to be on the same subnet as the internal interface of the FortiAP unit:
  - a. Browse to the *Network and Sharing Center > Change Adapter Settings > Local Area Connection Properties > Internet Protocol Version 4 (TCP/IPv4) Properties*.
  - b. Change the IP address of the management computer to 192.168.1.3 and the netmask to 255.255.255.0.
3. Use a Telnet application to connect to IP address 192.168.1.2.
4. Type `admin` in the *Name* field, leave the *Password* field blank, and press *Enter*.

5. Configure a static IP address for the FortiAP unit and netmask & gateway information for your network, using the following commands:

```
cfg -a ADDR MODE=STATIC
cfg -a AP_IPADDR=xxx.xxx.xxx.xx
cfg -a AP_NETMASK=255.255.255.0
cfg -a IPGW=yyy.yyy.yyy.yyy
cfg -a AC_IPADDR_1=zzz.zzz.zzz.zzz
```

where xxx is the IP address of the FortiAP unit, yyy is the Gateway IP address and zzz is the IP address of the FortiGate Wireless Controller.

6. Save the configuration by typing the following command:  

```
cfg -c
```
7. Unplug the FortiAP unit and plug it back in order for the configuration to take effect.
8. Move the FortiAP to the intended deployment location and connect the Ethernet cable as described in “Connecting the FortiAP Unit” on page 2.
9. Log in to the FortiGate controller Web-based Manager, and go to *WiFi Controller > Managed Access Points > Managed FortiAP*. A successfully discovered unit displays an orange circle with a question mark in the *Status* column.
10. Select the access point and click *Edit*.
11. In the *State* field, select *Authorize*.
12. In the *Edit FortiAP* dialog box, select *Enable Wireless Radio*. Leave the remaining settings at their default values. The configuration is downloaded from the FortiGate unit to the FortiAP device.

### Resetting the FortiAP unit:

Following an upgrade, some old configuration items from a previous firmware version or wrong configuration might remain in the configuration file. This may cause the unit to display unexpected behavior. Resetting the unit to factory default settings can correct this issue and will not change the firmware version.

The FortiAP unit can be reset to factory default settings in two ways: using the CLI, or using the hardware reset button.

#### To reset the unit using the CLI:

1. Connect to the unit using steps 1 through 4 of the enabling the FortiAP unit using the CLI.
2. Enter the following command:  

```
cfg -x
```

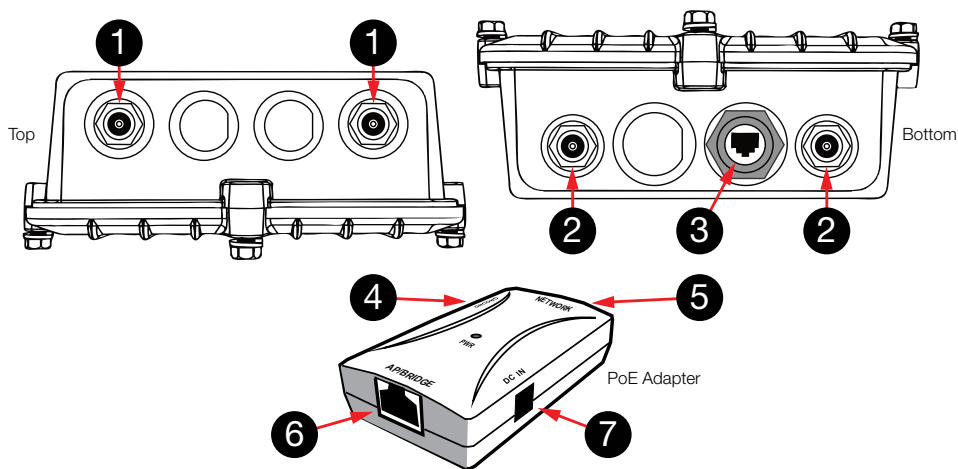
#### To reset the unit using the hardware reset button:

1. Locate the hardware reset button on the side of the PoE adapter.
2. Using an appropriate implement, press and hold the reset button for 5 seconds.  
The unit will reboot to factory default settings.

For more information, see the *Deploying Wireless Networks Guide*, available on Fortinet's technical documentation website, <http://docs.fortinet.com>.



# Technical Specifications



#	Interface	Type	Description
1	WLAN 1	N-type	Two 802.11a/n (5 GHz) antenna mounts.
2	WLAN 2	N-type	Two 802.11b/g/n (2.4 GHz) antenna mounts.
3	PoE Port	RJ-45	Gigabit Ethernet 48V PoE input from adapter via weatherproof Ethernet cable. Use with a weatherproof connector.
4	Ground	Copper	Electrical ground connection for PoE Adapter.
5	Network	RJ-45	Connection to your network.
6	AP/Bridge	RJ-45	PoE output. Provides 48V of DC power and network connectivity to the AP.
7	DC in		Provides power to PoE Adapter. 100-240V AC, 50-60Hz, 1.5A max

Hardware	Description
Dimensions	LxWxD: 10in x 8in x 3in (245mm x 200mm x 75mm)
Housing	Weatherproof enclosure
Mount	Wall or pole.
Frequency Bands (GHz)	802.11a/n: 5.15-5.35, 5.47-5.72, 5.725-5.825 802.11b/g/n: 2.400-2.484
Antenna Type	N-type connector

**Note:** The availability of some specific channels and/or operational frequency bands are country-specific and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

# Cautions and Warnings

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## Environmental specifications

*Refer to specific Product Model Data Sheet for Environmental Specifications (Operating Temperature, Storage Temperature, Humidity, and Altitude).*

*Référez à la Fiche Technique de ce produit pour les caractéristiques environnementales (Température de fonctionnement, température de stockage, humidité et l'altitude).*

## Safety

**Warning:** Equipment intended for installation in Restricted Access Location.

**Avertissement:** Le matériel est conçu pour être installé dans un endroit où l'accès est restreint.

**Battery** – Risk of explosion if the battery is replaced by an incorrect type. Do not dispose of batteries in a fire. They may explode. Dispose of used batteries according to your local regulations. IMPORTANT: Switzerland: Annex 4.10 of SR814.013 applies to batteries.

**Batterie** – Risque d'explosion si la batterie est remplacée par un type incorrect. Ne jetez pas les batteries au feu. Ils peuvent exploser. Jetez les piles usagées conformément aux réglementations locales. IMPORTANT: Suisse: l'annexe 4.10 de SR814.013 s'appliquent aux batteries.

### 警告

本電池如果更換不正確會有爆炸的危險

請依製造商說明書處理用過之電池

**Caution:** This equipment is to be used in a Network Environment 0 per IECTR 62101. This product is connected only to PoE networks without routing to the outside plant.

**Attention:** Ce matériel doit être utilisé dans un Environnement Réseau 0 par IECTR 62101. Ce produit est uniquement connecté aux réseaux PoE sans installation externe de routage.

This product has a separate protective earthing terminal provided on the back of the product in addition to the grounding terminal of the attachment plug. This separate protective earthing terminal must be permanently connected to earth with a green with yellow stripe conductor minimum size # 14 AWG and the connection is to be installed by a qualified service personnel.

Ce produit a une borne de mise à la terre séparé sur le dos de l'appareil, en plus de la borne de mise à la terre de la fiche de raccordement. Cette borne de mise à la terre séparée doit être connecté en permanence à la terre avec un conducteur vert avec la taille bande jaune de minimum # 14 AWG et la connexion doit être installé par un personnel qualifié.

Adequate grounding must be provided to the FortiAP unit and the PoE adapter. Grounding lugs are provided on both units for this purpose. Consult a certified electrician to ensure that all grounding and cabling is installed in compliance with the local electrical code.

Mise à la terre adéquate doit être fournie à l'unité FortiAP et l'adaptateur PoE . Des pattes à la terre sont prévus sur les deux appareils à cet effet. Consultez un électricien qualifié pour s'assurer que tous terre et le câblage sont installés en conformité avec le code électrique local.

The connecting cable between the outdoor equipment and the indoor ITE devices should comply with Class 3 wiring methods as listed in NEC, Table 725.154(G) for Class 3 Cable Substitutions.

Le câble connectant l'équipement extérieur et ceux d'intérieur de type ITE doit être conforme avec les méthodes de câblage de classe 3 tel que listé dans le standard NEC, Table 725.154(G) pour les câbles de substitutions de classe 3.

# Regulatory Notices

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## Federal Communication Commission (FCC) – USA

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received; including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

**WARNING:** Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

### Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 25cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

**Caution:** Operation of this device is restricted to indoor use only.

## Industry Canada Equipment Standard for Digital Equipment (ICES) – Canada

This Class B digital apparatus complies with Canadian ICES-003.

## Industry Canada (IC RSS) – Canada

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

### Radiation Exposure Statement

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 25cm between the radiator & your body.

### Déclaration d'exposition aux radiations

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 25cm de distance entre la source de rayonnement et votre corps.

**Caution:** The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems. High-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

**Attention:** Le dispositif de la bande 5150-5250 MHz est réservé à un usage intérieur afin de réduire l'interférence nuisible potentielle aux systèmes mobiles par satellite co-canal. Les radars à haute puissance sont désignés comme utilisateurs principaux (à savoir les utilisateurs prioritaires) des bandes 5250-5350 MHz et 5650-5850 MHz et que ces radars pourraient causer des interférences et / ou endommager les périphériques LE-LAN

This device has been designed to operate with an antenna having a maximum gain of 5 dBi for 2.4GHz and 7 dBi for 5GHz. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Ce dispositif a été conçu pour fonctionner avec une antenne ayant un gain maximal de 5 dBi pour 2,4 GHz et 7 dBi pour 5GHz. Une antenne ayant un gain supérieur sont strictement interdites par la réglementation d'Industrie Canada. L'impédance d'antenne requise est de 50 ohms.

Conformément à la réglementation d'Industrie Canada, cet émetteur radio peut fonctionner seulement avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique aux autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication réussie.

## Professional Installation Instruction

### 1. Installation personnel

This product is designed for specific application and needs to be installed by qualified personnel who has RF and related rule knowledge. The general user shall not attempt to install or change the settings.

### 2. Installation location

The product shall be installed at a location where the radiating antenna can be kept 27cm from nearby person in normal operation condition to meet Regulatory RF exposure requirement. The installation applies to both indoor and outdoor location.

### 3. External antenna(s)

Use only the antenna(s) that have been approved by the manufacturer. The non-approved antenna(s) may produce unwanted spurious or excessive RF transmitting power that may lead to the violation of FCC/IC limit and is prohibited.

### 4. Warning

Please carefully select the installation position and ensure that the final output power does not exceed the limit set forth in relevant rules. The violation of the rule could lead to serious federal penalty.

## Instructions d'installation professionnelle

### 1. Installation

Ce produit est conçu pour un usage spécifique et doit être installé par un personnel qualifié maîtrisant les radiofréquences et règle similaires. L'utilisateur ne doit pas tenter d'installer ou de modifier les paramètres.

### 2. Emplacement d'installation

En usage normal, afin de respecter les exigences réglementaires concernant l'exposition aux radiofréquences, ce produit doit être installé de façon à respecter une distance de 27cm entre l'antenne émettrice et. L'installation s'applique aux emplacements intérieur et extérieur.

### 3. les personnes. Antenne externe (s)

Utiliser uniquement l'antenne (s) approuvées par le fabricant. L'utilisation d'autres antennes peut conduire à un niveau de rayonnement essentiel ou non essentiel dépassant les niveaux limites définis par FCC/IC, ce qui est interdit.

### 4. Avertissement

Choisir avec soin la position d'installation et s'assurer que la puissance de sortie ne dépasse pas les limites en vigueur. La violation de cette règle peut conduire à de sérieuses pénalités fédérales.

## European Conformity (CE) – EU

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.



## National Telecommunications Commission (NCC) – Taiwan

### NCC警語

根據NCC低功率電波輻射性電機管理辦法規定：

#### 第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率，加大功率或變更原設計之特性及功能。

#### 第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機需忍受合法通信工業、科學及醫療用電波輻射性電機設備之干擾。

## Voluntary Control Council for Interference (VCCI) – Japan

この装置は、クラスB 機器です。この装置は、住宅環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

VCCI-B

## Bureau of Standards Metrology and Inspection (BSMI) – Taiwan

The presence conditions of the restricted substance (BSMI RoHS table) are available at the link below:

<https://www.fortinet.com/bsmi>

## Agência Nacional de Telecomunicações (ANATEL) – Brazil

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.



Para maiores consultas sobre ANATEL consulte o site: [www.anatel.gov.br](http://www.anatel.gov.br)

# Documentation and Links

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The following Fortinet web pages provide information and resources for your Fortinet product:

**1. Customer Service & Support:** <https://support.fortinet.com>

On this page you can create a support account with Fortinet, register and manage your products, download updates, firmware images and release notes, and create technical support tickets.

**2. Technical Documentation:** <http://docs.fortinet.com>

This page provides the most up-to-date versions of Fortinet publications for the entire family of Fortinet products.

**3. Knowledge Base:** <http://kb.fortinet.com>

This page provides Fortinet technical documentation, such as troubleshooting, how-to articles, example configurations, FAQs, technical notes, and more.

**4. Technical Discussion Forums:** <https://support.fortinet.com/forum>

This page allows you to communicate with other customers and Fortinet partners about Fortinet products, services, and configuration issues in a forum environment.

**5. Training Services:** <http://training.fortinet.com>

This page provides course descriptions, availability, schedules, and locations of training programs in your area.

**6. FortiGuard Threat Research and Response:** <http://www.fortiguards.com>

This page provides up-to-date information on vulnerabilities and threats, and includes a virus scanner, Internet Protocol (IP) signature look-up, web filtering tools, and related information.

## Tools and Documentation CD

The tools and documents on this CD are current as of shipping time.

## Comments on Technical Documentation

Please send comments or information about any errors or omissions in this or any Fortinet technical documents to [techdoc@fortinet.com](mailto:techdoc@fortinet.com).

# Register Your Product

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If you did not register your Fortinet product using the FortiExplorer wizard, please register your product now.

## Register

Register your Fortinet product in order to receive:

- Technical Support • New product features • Protection from new threats

## Enregistrer

Vous devez enregistrer le produit pour recevoir:

- Support technique • Nouvelles fonctionnalités du produit • Protection contre de nouvelles menaces

## Registra

La reistrazione ti permette di usufruire di:

- Supporto Tecnico • Nuove funzionalita • Protezione dalle ultime minacce

## Registrar

Debe registrar el producto para recibir:

- Apoyo técnico • Nuevas funcionalidades del producto • Protección contra ataques

## 登録のお願い

本日、フォーティネット製品の登録をしてください。

登録すると次のメリットがあります。

テクニカルサポート・新機能の追加・新しい脅威への防御

## 请马上注册

您的飞塔产品

您在注册以后才能得到技术支持、新产品特点信息、最新威胁防护

**Web: <https://support.fortinet.com/>**

**Toll free: 1 866 648 4638**

**Phone: 1 408 486 7899**

**Fax: 1 408 235 7737**

**Email: [register@fortinet.com](mailto:register@fortinet.com)**

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